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EDWIN E. SLOSSON, Director
WATSON DAVIS, Managing Editor

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AMERICAN EXPEDITION PENETRATES SAHARA IN QUEST OF ANCIENT MAN

By Alonzo W. Pond,
Leader of Logan Sahara Expedition of Beloit College.

In Salah, Algeria,----- (By French military communications and telegraph to Paris, thence by cable.) The Logan Sahara Expedition of Beloit College set out today on its archaelogical exploration of the great and unknown Sahara Desert. Before us lies a long and arduous journey of a thousand miles with camels as our beasts of burden.

But the outcome of our explorations, which are not so much geographical as prehistorical and archaeological, will if our hopes are realized throw new light on the past history of man.

Buried beneath the sands and guarded by the inaccessibility of the desert there are evidences that prehistoric man once inhabited this region.

What sort of human beings were they? What is their relation to modern man, and the natives of present-day Northern Africa? How did they compare with the Neanderthal and Cro-Magnon men who once roamed Europe, as evidenced by their skeletal remains?

With me is M. Maurice Reygasse, governor of Tebessa, Algeria, who is known for his archaeological and ethnological explorations of Northern Africa and who possesses great knowledge of the region that we shall traverse, since he journeyed through it in 1922.

For our protection the French Government has provided a small detachment ofnative soldiers who are mounted on swift desert camels. Much of the territory that we shall explore is known to be unsafe for travellers at times and in fact in several cases we shall be unable to take the exact route we had hoped because of hostile natives.

We are travelling as lightly as possible in a region which affords the traveller little or no help. Our supply caravan left three days ago in order that it may make the first leg of the journey with more leisure and ease. We are well-equipped for our exploratory work and through the use of ample digging tools and with cameras to record our discoveries, we expect to excavate successfully the new prehistoric sites we shall find.

From the town of In Salah, located in the Tidikelt region of the Algerian Territoire des Oasis, some 600 miles south of the Mediterranean Sea as the crow flies, we shall travel southwest to Aoulef Cheurf. From there we shall go to Taourirt, at which point we shall change our course and go northwest to Adrar.

During this part of the journey we shall be out of touch with civilization, and not until about December 15, when we are scheduled to reach Adrar, shall we be able to report our further progress.

We had intended going directly from Adrar to Charouin, but this direct route is impossible because of hostility of the natives. We therefore plan to go from Adrar to Brinken, then to Ouled Mahoud and thence to Timimoun. From Timimoun we shall make a side trip to visit Charouin to study a station or archeological site of old neolithic culture that is known to be there. Returning to Timimoun we shall travel northwest across the Grand Erg Occidental to Beni Ounif and then to Ain Sefra where our journey will be practically at an end.

M. Reygasse reports that the region around Aoulef Cheurf, our first objective, is known to have ancient paleolithic, Mousterian and neolithic sites. From the highlands known as the Grand Erg Occidental French officers bring back reports of finding evidence of neolithic cultures.

The material we collect and the studies we make may show the relation of the prehistoric cultures of the Sahara and those of the Mediterranean Coast and Europe. We shall make special efforts to find faunal or animal remains that will identify the exact geological eras or epochs in which the prehistoric cultures flourished.

Antropologists in America and Europe are interested in data that the Beloit-Sahara expedition under Alonzo W. Pond may supply to fill in an important gap in the map of the migrations of prehistoric man. The results achieved by Franco-American expedition, in which Dr. Pond participated, together with the preliminary work done in past years by M. Maurice Reygasse, French governor of Tebessa, are looked upon as reasons to hope that the trail of early man, which is now reasonably complete on the northern side of the Mediterranean, may soon be equally complete along its southern shore.

The map of man's migrations has grown in a most remarkable manner during the present year. At the beginning of 1925, the only well-authenticated human remains of the Neanderthal and Cro-Magnon types were those which had been made in southwestern and central Europe. But early last spring a Russian scientist named Bontisch-Osmolovsky discovered in a cave in Crimea parts of two Neanderthaloid skeletons, together with stone implements and bones of prehistoric animals. Then the Mongolian expedition of the American Museum, under Roy Chapman Andrews, reported the discovery in interior Asia of records of the "dune dwellers", who were also men of the Neanderthal type. These two discoveries vastly enlarged the known range of this ancient human race, and set the probable center of dispersal well to the east.

A key discovery was made near Capernaum, in Palestine, famed for its Biblical associations, when Francis Turville-Petre, an English paleonthologist, found the skull of a Neanderthal man of a peculiar and apparently advanced type. This suggested that the route that took the descendants of Abraham from Asia through Palestine and eventually into Egypt had been travelled long before by this primitive race. Stone age remains of all dates have longbeen known abundantly from the Nile region.

The puzzling skull from Rhodesia, in southern Africa, has some Neandertheloid feature, and may represent a third distinct migration that branched off toward the south.

The question now stands: did the Neanderthal and Cro-Magnon races migrate across northern Africa, at a time when what is now the lifeless Sahara supported grassy plains and possibly forests; And did they, upon reaching the Atlantic, complete the circuit of the Mediterranean and across over into Europe? The "Gibraltar woman" was of the Neanderthal type, and some of the other skulls discovered in the more southerly of the Europe/stations are distinctly negroid. Did the earliest "course of empire" take its way westward in two streams, that reunited at the end of the journey? Scientists are waiting for the answers that are hidden in the sands of the Sahara.

NEW THEORY OF LIGHT EMISSION MAKES DISTANT STAR AND EYE-BALL TOUCH

A new theory of the emission of light, formulated with the aid of the Einstein view of time and resulting in amazing conclusions, was announced by Prof. Gilbert W. Lewis of the University of California who is delivering the annual Silliman lectures at Yale University here this month.

Here are some of Dr. Lewis' startling conclusions:

An action in the present can alter the course of what we call past events.

A star whose light, which according to ordinary ideas, left it thousands of years ago, is in virtual contact with the eyeball of the observer.

Atoms do not emit light promiscuously into space but only to other atoms.

In his lectures Dr. Lewis made a survey of the concepts of science, and he had led up to the relativity theory and its applications. He pointed out that all the formulations of physics have already been re-formulated under the spacetime geometry of relativity. The theory of radiant energy has in part resisted such formulation. Dr. Lewis proceeded to demonstrate that, by furhter extension of the Einstein view of time it is possible to bring radiation completely into accord with the new geometry.

A new and remarkable concept of the emission of light is necessary, Dr. Lewis contends. The energy of light is corpuscular and the corpuscles act entirely like material particles, nevertheless each particle obeys the laws of the interference of light. Light can never pass to a place where optical theory predicts a dark inteference band. Dr. Lewis proposes that atoms do not emit light promiscuously into space but only to other atoms. It is not emission but transmission, in which the emitting atom and the receiving atom play symmetrical and equally important parts.

Dr. Lewis' new theory involves the amazing conclusion that what we do now determines whether certain light particles shall have left a star a thousand years ago although in ordinary parlance the star may have meanwhile disappeared. This seems absurd only because of our habits of using space and time, Dr. Lewis explained.

In relativity geometry the distance between the event of the emission and the event of absorption of light is zero. Because of this, Dr. Lewis said:

"My eye touches the star not in the same sense but in just as truly a physical sense as my finger touches the table."

"I do not wish to minimize the conflict between this view and that of common sense," Dr. Lewis explained. "The light from a distant star is absorbed by a molecule of chlorophyl in a leaf which has recently been produced in a living plant. We say that the light from the star was on its way toward us a thousand years ago. What rapport can there be between the emitting source and the newly made molecule of chlorophyl? Suppose by interference we prevent a particle of light from reaching a point. Do we thus prevent its original emission in just that particular direction? If so it means that we can, in a trivial way but nevertheless in principle, alter the course of what we call past events."

As a crucial test of the new theory, Dr. Lewis proposes a simple experiment based upon the pressure and interference of light. If the results of this test prove to be positive it will, like the Michelson-Morley experiment, require a great change in the traditional view of space and time, and further demonstrate the validity of the relativity geometry. The technical formulation of the new theory is embodied in a paper now in publication in the Proceedings of the National Academy.

Dr. Lewis' name is linked with that of Dr. Irving Langmuir of the General Electric Company as credited with what is known as the Lewis-Langmuir theory of the structure of the atom.

NEW ANASTHETIC GAS MAKES GOOD IN HOSPITAL

Propylene, one of the constituents of illuminating gas, is being used as an anesthetic in connection with major operations in a hospital, Dr. J.T. Halsey of Tulane University, reports satisfactory results.

This is a new step in the use of ingredients of common illuminating gas for anesthetic purposes. Ethylene, which belongs to the same chemical family tree as propylene, is already extensively used by dentists and in clinics and hospitals. But propylene is more than twice as potent, so that more oxygen can be administered with it, thus minimizing danger to the patient's breathing.

Butylene and amylene, two other members of the same family, are still more powerful, amylene having fifteen times the strength of ethylene. These two, however, are impractical for hospital use because they arouse marked nervous symptoms, which are not noted in reactions to the weaker gases.

Dr. Lloyd K. Riggs and Harold D. Goulden, of New Brunswick, N.J., who have made extensive studies of propylene with white rats, report that they have tried this gas experimentally on fifteen human subjects who volunteered for the tests.

"The higher concentrations of propylene quickly produce unconsciousness," they state. "Recovery is rapid, consciousness returns within one minute after administration of propylene is discontinued, and only one of the fifteen subjects was nauseated."

One of the two investigators allowed himself to be put under influence of propylene to the point of unconsciousness three times in one day, without any ill effects except a slight lack of coordination of his muscles which lasted for about fifteen minutes after the return of consciousness.

STONE AGE MEN KNEW SECRET OF BURNING CLAY

A little statue of Venus, made of burnt clay, has set the date when man blundered on the secret of firing clay objects back to at least the old stone age. The Venus is one of a series of burnt clay figures found at Vistonice, in southern Moravia, in the course of excavations by Prof. D.K. Absolon, curator of the museum at Brno, the capital of Moravia. The earliest examples of burnt clay objects hitherto discovered have dated only back to about 7,000 years ago, in the neolithic or new stone age.

This is only one of the important revelations of prehistoric men to come out of this old province of Czecho-Slovakia. Dr. Absolon's digging during 1925 has so far yielded enough stone implements, bones of mammoths, and other prehistoric animals, to fill 72 packing cases. Several hundred fine examples of Aurignacian stone weapons were discovered together, hidden under the shoulder blade of a mammoth, and thus protected for probably 25,000 years.

Reports of the important Moravian discoveries relating to the paleolithic age have been jumbled in British reports now also current in this country, according to Dr. Ales Hrdlicka, anthropologist of the U.S. National Museum.

Dr. Absolon's explorations at Vistonice are being confused with excavations made by Dr. K.J. Maska many years ago at the Moravian town of Prednost, about 80 miles further northward," said Dr. Hrdlicka, "Dr. Maska excavated at Prednost all the time he could spare for 30 years, at his own expense. As a result of his work he gathered together a most remarkable collection of the old stone age implements, bones of extinct animals, decorated mammoth tusks, as well as 18 human skeletons, a number of them practically complete, belonging to the same Aurignacian period. These human skeletons are the greatest treasure science possesses from the later paleolithic age. They represent, in a measure the much searched for bridge between Neanderthal man of the earleir stone age and recent man.

The Maska collection is now in the Brno museum, in the care of Prof. Absolon, and for the past ten years, Prof. Matiega, director of the Anthropological Institute of the University of Prague, has been working on a scientific report regarding them."

The report to the effect that Dr. Absolon has discovered human remains of this early period of history in connection with his valuable clay figures and animal bones is thus a confusion with Dr. Maska's work, Dr. Hrdlicka stated.

"A large portion of the new site at Vistonice, however, where Dr. Absolon is working, remains to be explored." said Dr. Hrdlicka, "and there is strong hope that skeletal remains of the men who made the stone weapons, burned the clay figures, and hunted the mammoth, will be discovered."

With the rich Prednost and Vistonice finds the Aurignacian period is now, in the opinion of Dr. Hrdlicka, better represented in Moravia than in any other part of Europe.

RIVAL CLAIMANTS FOR BLOOD PRESSURE REMEDY SEEK PATENT.

Dr. W. J. Macdonald, St. Catharines, Ontario physician, who addressed the Toronto Academy of Medicine recently on the use of liver extract in the treatment of high blood pressure, has denied the misappropriation of information from the

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A little [illegible]

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University of Western Ontario at London, where the claims of Drs. A.A.James and N.B.Laughton to priority have the full endorsement of the staff of the medical school. "I possess documentary evidence in support of my position, which will be available for publication if necessary," Dr. Macdonald declared. The London workers have challenged him to produce the evidence.

All parties are agreed, however, that Dr. Macdonald was the first to use extracts of liver for the treatment of human beings. His opponents claim he copied the methods already in use on animals, and that he was advised to watch for a drop in blood pressure, when he first administered the extracts to humans for another purpose. Dr. Macdonald on the other hand asserts that the possibility of using liver extract to reduce hypertension is entirely his own idea.

Professor J.J.R.Macleod, in whose laboratories at the University of Toronto, the researches are being continued, admitted that Dr. James and Dr. Laughton had lowered the blood pressure in animals with both histamine and liver extract when Dr. Macdonald was first associated with them.

The London biochemists are working steadily on the theoretical aspect of depressor substances, disclaiming any desire to "commercialize" their knowledge. Their claim to originality is backed by Dr. A.B.Macallum, professor of biochemistry at McGill University, Montreal, whose reputation is world wide. He said: "Drs. James and Laughton had demonstrated a liver substance capable of lowering blood pressure before Dr. Macdonald went to London to work in October, 1924, when he began another problem which had a futile ending within three weeks, but during which period Dr. Macdonald learned of the effect of this extract on blood pressure."

Dr. Macdonald himself gives "recognition" to the London work.

The rival claims will likely be fought out in court. Both parties have applied for Canadian patent rights, and in view of the dual application, a court hearing, with evidence offered under oath if necessary, will take place before either side is given a title.

Officials of Canadian universities who have followed the dispute express disappointment at the attitudes of the two factions, indicating that the altruistic spirit with which a medical discovery should be regarded, has long since been forgotten. A similar lack of harmony marred a previous important discovery, it is stated.

The incident will have the unfortunate result of cluttering scientific literature, already appalling in its volume and complexity, with the half-considered and unconfirmed conclusions of individuals anxious to ensure priority, it is pointed out. Fear is also expressed that co-operation, essential for rapid progress in this field of science, will be entered into with increasing diffidence.

SCIENTIST SAILS TO INVESTIGATE BRITISH CANCER DISCOVERIES

Light on the so-called lead cure, Dr. W.E. Gye's announcement of cancer inoculation tests, and other recent British cancer discoveries is to be sought by Dr. Francis Carter Wood, of the Institute of Cancer Research of Columbia University, who sailed for Europe, December 9. Dr. Wood, who is vice-president of the American Society for the Control of Cancer, will make an official report of his investigation to the Society on his return to this country.

University of Western Ontario at London, where the claims of Drs. [illegible] and N.S.[illegible] [illegible] giving them the full [illegible] of the [illegible] of the [illegible] school. [illegible] documentary evidence [illegible] which will be available for publication if necessary," Dr. [illegible] said. [illegible] challenged him to produce the evidence.

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Officials of [illegible]

The incident will have [illegible]

SCIENTIST SAILS TO INVESTIGATE [illegible]

Light on the so-called [illegible] by Dr. Francis Carter Wood, of the [illegible] University, who sailed for Europe, December [illegible] the American Society for the Control of Cancer [illegible] his investigation to the [illegible]

"Reports of British cancer discoveries which are arousing so much attention are often misleading and incomplete," said Dr. George A. Soper, managing director of the Society.

"We are prepared to give the widest publicity to any new facts, providing they are really well established. But the American Society deplores premature and sensational announcements made by the press, which arouse false hopes among cancer patients.

" Due to the public's eagerness for information which will make the cancer problem clear, the words and meanings of those who talk about their discoveries are often misconstrued, and the practical value of the work grossly exaggerated. For example, in the case of the Gye and Barnard discoveries the impression seems to have obtained currency that if these gentlemen are right the cure of cancer is in sight. In my conversations with Dr. Gye last summer, he expressly wished it understood that this is far from being his view.

"It is not enough for cancer experiments to be done once. They must be checked carefully. And in many cases the value of the work can be completely established only by numerous independent researches. Some of the recent announcements of the most startling character are by men of high training and ability, but the history of cancer research, as well as experience of hospitals for many years, has shown that even the most careful scientist may be occasionally in error. The public should accept with caution all announcements as to the cause and cure of cancer, and judgement should be suspended until the work reported can be fully confirmed."

CLAIMS NEW SERUM PROTECTS FROM TUBERCULOSIS

Has an old village doctor of Spain, who rose to spasmodic fame by his discovery of anti-cholera serum, but sidled back to obscurity, repeated his odd feat of forty years ago, and given mankind a weapon against another scourge, tuberculosis?

Dr. Ferran, of Barcelona, discoverer of a vaccine protecting against Asiatic cholera told the Berlin Medical Association recently of the new serum which he makes from a harmless germ and which he says gives immunity against tuberculosis. His serum is to be tried out in Berlin, and his claim either proved or disproved.

Wholesale vaccination in a children's hospital in Buenos Aires proved the effectiveness of the vaccine, Dr. Ferran claimed. The death rate of the children was cut in half in a year, and no deaths resulted from tuberculosis.

The novelty of Dr. Ferran's theory is his claim that the tubercle bacillus is not one definite kind of an organism, but that it is a regular Dr. Jekyll and Mr. Hyde sort. It changes back and forth between a comparatively harmless type, like those found in decaying matter, and the virulent sort that causes active tuberculosis. The conditions of the body determine which road the organism shall take.

Dr. Ferran succeeded in bringing up virulent tubercle bacilli in his laboratory in such a way that they lost their dangerous ways and became harmless. He also succeeded in doing the reverse, and showed that the virulent tubercle could come from good beginnings.

Tests on animals showed that the good could become bad within the body.

Just as his anti-cholera serum claims were considered highly improbable forty years ago, so his claims for the anti-tuberculosis serum are considered today by many medical authorities.

The protective serum is made from the harmless twin but Dr. Ferran claims it protects against the virulent one, and prevents the metamorphosis of the good into the bad.

DISEASES MAKE GREAT INROADS ON CROP YIELDS

One out of every twelve wagon loads of wheat is the annual loss due to illness of the American wheat crop. The U.S. Bureau of Plant Industry has estimated the yearly loss on account of plant diseases of some of the major crops.

The cotton crop pays even more dearly, for the diseases of the cotton plant levy a payment of one bale out of every eight. Nearly one bushel of Irish potatoes is lost out of every five, and over one bushel of sweet potatoes in every six. Diseases of the corn plant cost about one bushel in eleven.

In five years' time from 1919 to 1924, the loss of wheat from plant disease has dropped from 17 to 9 per cent. Losses in sweet potatoes have dropped significantly from 36 per cent. in 1919 to less than 18 per cent. in 1922, while cotton conditions have fluctuated from a loss of about 14 per cent. to 19 per cent. in this time.

Stem rust is the most serious ailment of wheat and rye, while root and ear rot cause most of the damage in corn. Leaf roll is the most important of the many potato diseases.

The host of diseases which menace certain important crops in the United States present a serious economic problem in American agriculture. Plant diseases, together with insect pests, take a large slice out of the national income yearly.

CANCER INCREASE DECLARED REAL

A careful analysis of cancer statistics gathered by the U.S. Census Bureau over a period of about 20 years in ten Eastern states reveals definitely that cancer mortality is from 25 to 30 per cent. higher than it was about 20 years ago. This is the claim of Dr. J.W. Schereschewsky, of the U.S. Public Health Service, who made the statistical analysis and reported it to the American Medical Association.

"There has been a pronounced increase in the observed death rate from cancer in persons 40 years old and over in the ten states comprising the original death registration area," Dr. Schereschewsky said. "Part of this increase is due to greater precision and accuracy in the filling out of death returns, but the remainder is an actual increase in the mortality of the disease."

Tests on animals showed that the mould became bad within the body.

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[illegible] rot [illegible] potato diseases.

The cost of disease [illegible] Statistics [illegible] together with insect pests, [illegible].

CANCER INCREASE EXPLAINED [illegible]

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AMERICAN MUSEUM GETS FIRST SYNTHETIC GOLD

The first sample of synthetic gold which has reached this country is to be an exhibit in the collection of elements at the American Museum of Natural History.

Dr. George F. Kunz, noted gem expert who has the difficult task of gathering together samples of as many of the 92 elements as can be obtained or exhibited, stated that the sample of what is said to be synthetic gold is a tiny speck. It is a product from the laboratory of Prof. Hantaro Nagaoka, of the Tokyo Imperial University, who obtained microscopic quantities of what he reports to be artificial gold from mercury by running a mercury lamp over a long period and employing extremely high voltage.

Dr. Kunz has in his collection the first crystals of pure fluoride of hafnium and metallic hafnium. He has not yet obtained samples of the two new elements, rhenium and masurium.

DEC. 10, EARTHQUAKE WEST OF PANAMA CANAL

The bottom of the Pacific Ocean about a thousand miles west of the Panama Canal again heaved a sigh at 9.15 a.m. (Eastern Standard Time) on Thursday, December 10, as it did before in 1916. This was the earthquake recorded on the delicate seismographs at various observatories in the United States and Canada. Reports to Science Service from the seismograph stations at Georgetown University, Washington; Fordham University, New York; Regis College, Denver; Harvard University, Cambridge; the Dominion Observatory, Ottawa, Canada; the U.S.Weather Bureau at Chicago and the U.S.Coast and Geodetic Survey at Tucson, Arizona have been studied by the earthquake experts of the Coast and Geodetic Survey here. They find that the center of the disturbance was at latitude 9 degrees north and longitude 92 degrees west. This is in the Pacific Ocean about 300 miles southwest of Libertad, Salvador. The quake seems to have been quite severe. While mild tremors were felt in Jamaica about 11 o'clock the same morning, they had no connection with the one in the Pacific.

FORD GIVES FIRST EXHIBIT TO INDUSTRIAL MUSEUM

Henry Ford has contributed the first exhibit for the Museums of the Peaceful Arts which are to be established in New York City, according to a statement just made by Dr. George F. Kunz, president of the association which is establishing the museums. The gift is a set of fine gages running from one-hundred-thousandth of an inch up to four inches, and is the work of E.C.Johannsen internationally known as a maker of gages.

"The museums are to be like the great industrial museums of London, Paris, Berlin, Munich, and Vienna," Dr. Kunz stated. "They are not to contain single historical machines, which would be interesting only ascuriosities, but they are to show the developement of the industries and peaceful arts in America, so that young men and women can study the background trend of the arts they are promoting. It has been said that no single workman in a shoe factory today knows how to make an entire shoe.

"There will be permanent exhibits of electricity, astronomy and navigation, steam, safety appliances, mechanical arts, health and hygiene, ceramics, agriculture, printing and books, commerce, roads, and architecture. There is to be a library containing books on these subjects. If there had been such a museum for reference in this country during the war, it would have saved the United States billions of dollars."

The museum association has received a gift of $50,000 through the will of Henry R. Towne, of New York.

CASH VALUE OF HUMAN LIFE INVESTIGATED

The dollars and cents value of a human being's existence, taking into consideration the investment he represents and his commercial importance to the world, is being investigated by Dr. Louis I. Dublin, statistician of the Metropolitan Insurance Company, here.

"A man's estimate of the value of his own life may fluctuate widely," said Dr. Dublin today. "At one time, he may be willing to sacrifice all his worldly goods to save his skin, and at another time, as suicide statistics show, he may value his life at less than nothing. But his family and his business associates and the community at large all have a close interest in his existence, and it is sometimes necessary for courts and insurance companies to set a numerical estimate on the worth of a human life.

"The same methods that are used to evaluate manufacturing plants can be applied to the individual. We have to reckon the cost of installation, running expenses, and a sinking fund against the time of expiration. On the credit side of the account we have such items as current earnings, unpaid services rendered, participation in the upkeep of population, and so forth."

SMOKERS' STIMULATION PHYSICAL NOT MENTAL

Excitement caused by smoking cigarettes is not a mental spree, but a physical one, according to tests given by R.M.Dorcas, of the Johns Hopkins University.

Hypnotism was used by the experimenter as a means of controlling the mental state of the smokers. He found that, regardless of what was going on in the minds of the subjects, tobacco caused an increase in their blood pressure and pulse rate. The intensity of the heart beat was also found to increase from the physical influence of tobacco.

Eighty per cent. of all commercial ice and refrigerating plants operate on ammonia.
